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Mario Scholz

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EXAMINER

SALVITTI, MICHAEL A

ART UNIT

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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/591,610	Applicant(s) SCHOLZ ET AL.	
	Examiner MICHAEL A. SALVITTI	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) 1-4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 1-4 are objected to because of the following informalities:

Regarding claims 1 and 2: "BET" is not identified as a measurement of surface area. For the purposes of further examination, claims 1 and 2 will be interpreted as "...having a surface area, as measured by BET, of {value1} to {value2} m²/g as filler".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 4, reciting a bulk density of at "least approximately 120 g/L" is lacking support in the disclosure.

The instant specification provides no support for compacted bulk densities above 266 g/L.

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The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1: The term "very high tear propagation resistance" in claim 1 is a relative term which renders the claim indefinite. The term "very high tear propagation resistance" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Instant claim 1, read in light of the specification, provides no guidance in how tear propagation resistance is measured nor does it quantify very high tear propagation resistance. For the purposes of further examination, a prior art composition meeting the requisite component limitations of claim 1 (silicone rubber, vinyl-modified silica with required surface area) has been held to possess a "very high tear propagation resistance".

Regarding claim 1: The term "an effective amount" in claim 1 is a relative term which renders the claim indefinite. The term "an effective amount" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The word "effective" does not even appear in the application. For the purposes of further examination, "an effective amount" will be given the broadest reasonable interpretation and interpreted to mean any amount present.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,331,588 to *Azechi et al.*

Regarding claims 1-2: *Azechi* (Example 1, col. 8) teaches a silicone rubber containing an effective amount (40 pbw see Table 1, Comparative Example 3) of structurally modified (surface modified) hydrophobic pyrogenic (fumed) silica (*Azechi* col. 7, lines 55-67). These hydrophobic pyrogenic silicas have BET surface area of 180 m²/g (S4; see col. 8 Table).

Although silicas in the S1-S4 working Examples are modified with hydrophobic non-vinyl surface modifiers (dimethyldichlorosilane and hexamethyldisilazane; col. 7, lines 63-64), *Azechi* is clear in teaching vinyl modification (“an alkenyl group (vinyl, etc.)” *Azechi* col. 5, line 27). “A genus does not always anticipate a claim to a species within the genus. However, when the species is clearly named, the species claim is anticipated no matter how many other species are additionally named.” *Ex parte A*, 17 USPQ2d 1716 Bd. Pat. App. & Inter. 1990; see MPEP § 2131. Of the 33 surface modifying agents disclosed by name, 13 incorporate vinyl moieties (*Azechi* col. 5, lines

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35-62). Vinyl triethoxysilane, utilized in Table 2 in the instant specification, is taught by *Azechi* (col. 5, line 47). Therefore, vinyl modification is taught with sufficient specificity.

As noted in the 35 U.S.C. 112 rejection above, the property of high tear propagation resistance is held inherent to the composition of *Azechi*, since all components of the composition as recited are present.

“Structurally modified” is not defined in the specification, and has been interpreted as being any modification to the silica particle. In the instant case, surface modification has been interpreted as being structural modification.

Regarding claim 3: The silicone rubber of *Azechi* is a liquid silicone rubber (see Title, Abstract, col. 1, lines 50-55 and viscosity measurements in Example 1).

Regarding claim 4: *Azechi* teaches the composition of claim 1, as set forth above.

Although *Azechi* is silent regarding the structurally modified hydrophobic pyrogenic silica as having a compacted bulk density of 120 g/L, this property has been held inherent for the following reasons: *Azechi* teaches utilizing pyrogenic silica (fumed silica; col. 7, line 60) which is mixed directly in the presence of the surface treatment agent (col. 5, lines 10-23).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,331,588 to *Azechi et al.* in view of U.S. Patent No. 6,384,125 to *Bergstrom et al.* These rejections are alternative rejections to the rejections set forth under 35 U.S.C 102(b) above.

Regarding claims 1-2: *Azechi* (Example 1, col. 8) teaches a silicone rubber containing an effective amount (40 pbw see Table 1, Comparative Example 3) of structurally modified (surface modified) hydrophobic pyrogenic (fumed) silica (*Azechi* col. 7, lines 55-67). These hydrophobic pyrogenic silicas have BET of 300 m²/g (S4; see col. 8 Table).

Azechi is silent regarding an explicit embodiment wherein the silica is vinyl-modified. *Bergstrom* teaches silica surface-modified with methylvinylchlorosilane (col. 10, line 50). *Azechi* and *Bergstrom* are analogous art in that they are drawn to the same field of endeavor, namely silicone resins comprising surface-modified silica particulates. At the time of the invention, it would have been obvious to a person having ordinary skill in the art to modify the composition of *Azechi* with a vinyl modifier, with the motivation of allowing the ethylenically unsaturated vinyl groups to react with the polyorganosiloxane (*Bergstrom* col. 5, lines 30-33), thereby increasing the affinity of the silica to the polymer resin (*Bergstrom* col. 2, lines 34-40).

Regarding claim 3: The silicone rubber of *Azechi* is a liquid silicone rubber (see Title, Abstract, col. 1, lines 50-55 and viscosity measurements in Example 1).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,331,588 to *Azechi et al.* in view of U.S. Patent No. 6,384,125 to *Bergstrom et al.* as applied to claim 1 above under 35 U.S.C. 103(a), and further in view of US 2002/0077412 to *Kobayashi*. This rejection is an alternative rejection to the rejection set forth under 35 U.S.C. 102(b) above.

Regarding claim 4: *Azechi* in view of *Bergstrom* teaches the silicone rubber composition of claim 1, as set forth above.

Azechi is silent regarding the property of a compacted bulk density of at least 120g/L. *Kobayashi* teaches silicone resins comprising hydrophobic treated silica with a bulk density of 140 g/L (¶ [0044]). Although *Kobayashi* does not state whether this is compacted or not, the Examiner takes official notice that compacting the silica would further increase the density, which would not alter the rejection in view of the recited claim. *Azechi* and *Kobayashi* are analogous art in that they are drawn to the same field of endeavor, namely silicone resins comprising hydrophobically treated silica. At the time of the invention, it would have been obvious to a person having ordinary skill in the art to substitute a hydrophobically treated silica with a compacted bulk density of at least approximately 120 g/L or greater into the resin of *Azechi*, with the motivation of imparting superior flowability and water repellency (*Kobayashi* ¶ [0023]).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory

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obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-3 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 of U.S. Patent No. 7,563,839 in view of USPN 6,384,125 to *Bergstrom et al.* Although the conflicting claims are not identical, they are not patentably distinct from each other.

Regarding claims 1-2: *US '839* recites a composition comprising silicone rubber and a structure-modified hydrophobic pyrogenic silica (claim 1). This compound has surface area of 10-100 m²/g (claim 2).

US '839 is silent in modifying with a vinyl. *Bergstrom* teaches silica surface-modified with methylvinylchlorosilane (col. 10, line 50). *US '839* and *Bergstrom* are analogous art in that they are drawn to the same field of endeavor, namely silicone resins comprising surface-modified silica particulates. At the time of the invention, it would have been obvious to a person having ordinary skill in the art to modify the composition of *US '839* with a vinyl modifier, with the motivation of allowing the

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ethylenically unsaturated vinyl groups to react with the polyorganosiloxane (*Bergstrom* col. 5, lines 30-33), thereby increasing the affinity of the silica to the polymer resin (*Bergstrom* col. 2, lines 34-40).

Regarding claim 3: *US '839* recites liquid silicone rubber (LSR; claim 1).

This is a provisional obviousness-type double patenting rejection.

Claims 1-2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2 and 7 of copending Application No. 10/591,609.

Regarding claims 1-2: *Application '609* recites a silica rubber (claim 7) comprising pyrogenic, structurally modified (claim 1) vinyl modified (claim 2) filler with a surface area fo 103-400 m²/g (claim 1).

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

The following responses are directed to the document entitled "Remarks" (pages 3-6), received August 11th, 2009.

A) Applicant's arguments directed to rejection of the presently claimed invention under 35 U.S.C. 102(b) over USPN 6,331,558 to *Azechi et al.* been fully considered but they are not persuasive (page 3).

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., destructured silica, low-structure silica) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The instant specification does not define "structurally modified" and as such, the term has been given broadest reasonable interpretation as meaning any modification to the silica; surface modification certainly is a means of structural modification.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., DBP and viscosity) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The instant specification does not disclose DBP, and its meaning can not be determined

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by the Examiner from the Applicant's arguments nor the prior art teachings. Further clarification is requested.

In response to properties such as bulk density and tear propagation, *Azechi* shows clear anticipation of the presently claimed composition. "Products of identical chemical composition can not have mutually exclusive properties." A chemical composition and its properties are inseparable. Therefore, if the prior art teaches the identical chemical structure, the properties applicant discloses and/or claims are necessarily present. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). See MPEP § 2112.01 (II).

B) Applicant's arguments with respect to the rejection of claim 1 under 35 U.S.C. 102(b) by USPN 5,976,480 to *Mangold et al.* have been considered but are moot in view of the new ground(s) of rejection.

C) Amendment to claims 1-3 has not overcome the double patenting rejection (Formerly App# 11/050,198, recent granted patent US 7,563,839) in view of USPN 6,384,125 to *Bergstrom et al.*

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. SALVITTI whose telephone number is (571)270-7341. The examiner can normally be reached on Monday-Thursday 8AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/
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